

Municipality/Organization: Town of Bedford, Massachusetts

EPA NPDES Permit Number: MAR 041028

MassDEP Transmittal Number: W-132333

Annual Report Number

& Reporting Period: April 1, 2006 – March 31, 2007

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2007)

Part I. General Information

Contact Person: Adrienne St. John

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Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Printed Name: Richard T. Reed

Title: Town Manager

Date: April 30, 2007

Part II. Self-Assessment

- Part 1.B.2(e)vi** **The Town is aware of the new Endangered and Threatened Species list, but has not yet determined if any of the Town discharges have a negative effect on the species.**
- Part 1.B.2(k)(I)** **The Town is continuing to perform water quality testing to identify sources of bacteria in the Shawsheen River.**

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1-1 Revised	Residential Flyer	DPW/SuAsCo	Distribute to 75% of homes	Flyer available at public information sites; given to new residents who missed first distribution	Redo and distribute flyer to reinforce stormwater practices
1-2 Revised	Education Program	DPW/SuAsCo	Teach in 5 th grade	None	Teach in class
1-3 Revised	Develop web site	DPW	Have in place by 7/05	Web site in place	Continue to add information, EPA links, helpful tips
1-4 Revised	Stormwater flyer to businesses	DPW/SuAsCo	Distribute to 50%	Flyer received from SuAsCo; developed data base for 75% of local businesses.	Distribute to 75% of businesses
1-5 Revised	Stormwater video	DPW	Show video on local cable station	Video shown bi-weekly at various time slots on local cable station.	Continue to run video.
Revised					

1a. Additions

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2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
2-1 Revised	Stormwater Display	DPW/SuAsCo	3 mos. at library, Town Hall, Schools	New Stormwater banner hung at DPW, original posters shown at public events, meetings, Town Hall	Continue to display
2-2 Revised	Local Stormwater Committee	Selectmen, DPW ConsCom, Plannin g	Form committee by 12/04	Existing drainage committee not conducive to stormwater functions	Set up new committee
2-3 Revised	Stormwater meetings	DPW/SW Committee	Meet 3x/year	Did not meet	New committee to meet 3 times
Revised					
Revised					
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3-2 Revised	Map SW outlets	DPW	75% capture rate	Continued to GPS outlets (179 GPS'd in Year 4, digitized As-Built drawings from older subdivisions)	Continue
3-3 Revised	Identify critical resources	DPW, ConsComm	Map, notify abutters, develop BMP	Targeted abutters to bike paths, Conservation areas and rail trails to stop illegal dumping of brush; notified them of approved dump site on Carlisle Road. Assisted with Scouts clean up of trash & debris on public properties.	Continue – target abutters to public easements
3-4 Revised	Perform water quality testing	DPW	3 sites – residential, municipal, commercial	Continued with dry weather E. Coli testing at drainage outlets, Shawsheen River, Elm Brook. Met with EPA who is performing own sampling in this area	Continue sampling
3-5 Revised	Local bylaw – illicit discharges	DPW/Selectmen, Planning	In place by 7/06	Draft bylaw written	Obtain feed back and comments
Revised					
Revised					

3a. Additions

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4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4-1 Revised	Develop awareness of construction site issues	DPW, Code, ConsComm	Write guidelines, distribute to builders	Require Erosion and Sed. Control measures in place for site plan and subdivision projects. Require stone driveway entrances, require infiltration of roof runoff. Use and promote hydro-excavations.	Continue
4-2 Revised	Control construction site waste	DPW, Code, ConsComm.	Reduce litter, erosion, dust, sediment	Require weekly trench paving on utility and road projects. Perform regular inspections on construction projects.	Continue to monitor construction projects.
4-3 Revised	ESC plans for disturbances > 5,000s.f.	Code, DPW, ConsComm.	Draft bylaw by 7/07		Draft bylaw by 7/07
Revised					
Revised					
Revised					

4a. Additions

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5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5-1	Develop bylaw to address stormwater impacts	Selectmen, Planning, DPW, Cons. SW Comm.	In place by 12/05	Draft bylaw and regulations written	Obtain feed back and comments; adopt at Annual Town Meeting
Revised					
5-2	Promote infiltration	Planning, DPW, Code, ConsComm	No increase in flood levels or locations	Require gutters and downspouts on all new structures, including major additions. Recommending rain gardens, bioretention design on site plan reviews.	Continue
Revised					
5-3	Expand grass plots, reduce pavement widths	DPW, Planning	Improve infiltration	Recommend LID techniques during site plan and subdivision reviews. Allow reduced pavement width on some smaller housing projects.	Continue Construct rain gardens in existing cul-de-sacs to reduce impervious.
Revised					
5-4	Research rain barrels	DPW	Distribute to 10 households for pilot program	Distributed 2 barrels; small sample didn't give good feedback (barrels take too long to empty)	Add more barrel locations; maybe increase size of hose connection
Revised					
Revised					
Revised					

5a. Additions

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6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6-1 Revised	Street sweeping, CB cleaning	DPW	2x per year in critical areas	Continued program. Swept all 80 miles of roadways. Commercial areas swept 6 times per year.	Continue
6-2 Revised	Inspect older sewer mains	DPW, MWRA	TV 1 mile per year	Inspected approx. 5000 l.f.	Repair identified problems.
6-3 Revised	Promote/use alternative fertilizers & pesticides	DPW, ConsComm	Reduce nitrogen loading	DPW using fertilizer on an as-needed basis only. Cons. Comm requiring no-salt areas on projects.	Continue
6-4 Revised	Develop spill prevention plan	DPW, Fire, DEP	Purchase spill control equipment	Purchase and stock pile of booms, pads, protective equipment	Continue
6-5 Revised	Site better snow dump	DPW	Locate site by 12/05	Site located; not needed in 2006	
Revised					

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2006 through March 31, 2007)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures **	(\$)	\$10,000
Total program expenditures since beginning of permit coverage	(\$)	\$25,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	95%
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	500 ft
Shoreline cleaned since beginning of permit coverage	(mi.)	2,000 ft
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	8
▪ community participation **	(# or %)	15%
▪ material collected **	(tons or gal)	450 gal
School curricula implemented	(y/n)	N

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination				x	
▪ Erosion & Sediment Control	x				
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination				x	
▪ Erosion & Sediment Control	x				
▪ Post-Development Stormwater Management					

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	70
Estimated or actual number of outfalls	(#)	400
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	85
Mapping method(s)		
▪ Paper/Mylar	(%)	15
▪ CADD	(%)	5
▪ GIS	(%)	80
Outfalls inspected/screened **	(# or %)	170
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	210
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	92
% of population on septic systems	(%)	8

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	200
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	2

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	50
Site inspections (for proper BMP installation & operation) completed **	(# or %)	15
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	2
Qty of structures cleaned **	(#)	1600
Qty. of storm drain cleaned **	(%, LF or mi.)	2000 lf
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	30 ton
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$24,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$8.45/basin
• Disposal cost**	(\$)	\$15,000
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	n
• % Structures cleaned with clam shells **	(%)	95%
• % Structures cleaned with vactor **	(%)	5%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	6
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	400 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$18,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	\$84.75/hr
• Disposal cost**	(\$)	\$25,000
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)
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▪ Fertilizers	(lbs. or %)	25%
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	25%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Y

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	60% 10% 30%
Pre-wetting techniques utilized **	(y/n or %)	y
Manual control spreaders used **	(y/n or %)	y
Zero-velocity spreaders used **	(y/n or %)	y
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l _n mi. or %)	+ 20%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n mi. or %)	-20%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	n
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	1 planned
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	n